OWTS Policy Implementation, Informal LAMP Reviews to Date, Issues Summary, E. Rapport 17 March 2016, Presented in CCDEH Region 1 Meeting, Placer County Environmental Management Department, Auburn (EJR revised 24 March 2016)

General:

- For the Preliminary Completeness Checklist, *Relevant LAMP Section*, provide complete text citations, sufficient for cross-referencing with the OWTS Policy. We need to check that your document meets specific minimum standards of the appropriate Policy section, e.g., for record keeping, reporting, notifications, and setbacks. In some cases, applicants have submitted Word documents with hot-links in the checklist; these correlate bookmarks in the document to hyperlinked LAMP sections in the list. This has served to expedite reviews.
- For *Legal Authority/Codes,* include both codes and accompanying text. Include all codes, including those beyond your Agency, where relevant. For example, in some cases, Public Works codes cover disposal areas; see OWTS Policy Section 9.2.6. Some Local Agencies have codified technical manuals and other large portions of a LAMP by reference with Board of Supervisors' approvals, in which case we might not object to a general default citation. If your Board of Supervisors has not approved proposed code or ordinance changes, provide a Resolution with the proposed changes, and cite the legal authority as "Pending Board of Supervisors adoption; see attached proposal." In sparsely populated jurisdictions, a Local Agency could cite Tier 1 requirements as a default, with relatively small areas as Tier 2. For the Tier 1 default areas, a Local Agency could locally permit and enforce with existing nuisance authority, but must clearly commit to implementing minimum Tier 1 standards.

Section Specific:

Policy Section	Issues Summary	Response
2.6.4, (not on checklist)	Some interested parties have asked whether or not an oversized septic tank could serve in lieu of an oil/grease interceptor at a commercial food facility.	An oversized tank is an unacceptable alternative. State Board staff is preparing an information sheet for Local Agencies' use that will describe the cost advantages to restaurants of installing a grease trap over submitting a Report of Waste Discharge to a Regional Board.
3.3		
3.3.1		
3.3.2		
3.3.3	Because this section requests risk tiers for permits of new and replacement OWTS, some informal drafts have objected, perceiving that we request an area-specific LAMP, with Tier 1 and 2 zones.	You may indicate that all permits are Tier 2, as appropriate.
3.4		
3.5	Some informal drafts have not sufficiently described notifications to public water purveyors. Some interested parties have asked whether setbacks can extend across jurisdictional boundaries.	See also, OWTS Policy Section 4.3.2; upon receipt of a formal draft LAMP, Regional Board staff will have 30 days to solicit comments from State Board Division of Drinking Water (DDW). Ensure that LAMPs sufficiently address Sections 7.5, 11.1, and 11.2. Setbacks can extend across boundaries. For example, pursuant to OWTS Policy Section 7.5.7, if an OWTS were to fail within 1,200 feet of a public surface water intake, a Local Agency must notify the owner of the intake and DDW within 72 hours, regardless of an intervening boundary such as a county line in a river channel.
9.0		
9.1	Some informal drafts have not described data collection, compilation, and reporting. Some informal drafts refer to Federal, State, and City jurisdictions that decline to adopt revised codes and ordinances. Some interested parties have	Describe your commitment to meet minimum requirements for Annual and Water Quality Assessment Reports. See also, our "straw man" reporting requirements spreadsheet dated 13 April 2015; check with Leslie Lindbo, Ray Ruminski, and Brad Banner – we are soliciting your comments for pending discussions with State Board staff on feasible means of data uploads and access to water quality data, e.g., with Geotracker GAMA-secure. LAMPs should apply to these jurisdictions to the extent authorized by law agreement. Local Agencies could only assert environmental jurisdiction over tribal lands if the

	similarly asked about Local Agency jurisdictions of tribal lands.	tribe were to waive its sovereign immunity and grant the Local Agency (or Regional Board) the ability to implement a program.
9.1.1	Some informal drafts have not defined *Qualified Professionals*.	Dependent on the work performed, OWTS Policy Definitions allow California Professional Geologists, Engineers, Registered Environmental Health Specialists, and Soil Science Society of America Certified Soil Scientists to perform professional services. California Board of Professional Engineers, Land Surveyors, and Geologists (BPELSG) staff is now reviewing the OWTS Policy definition in terms of licensing codes, and will further advise. In the interim, BPELSG advises that licensing requirements are unique to specific situations, and suggests that Qualified Professionals review definitions in licensing codes; for civil engineers, Section 6731, Business and Professions Code: http://www.bpelsg.ca.gov/laws/pe_act.pdf for geologists, Section 7802, Business and Professions Code: http://www.bpelsg.ca.gov/laws/gg_act.pdf See also Laws and Regulations for civil engineers and geologists: http://www.bpelsg.ca.gov/laws/index.shtml, and limits for Registered Environmental Health Assessors and Soil Science Society of America Certified Soil Scientists: http://www.cdph.ca.gov/certlic/occupations/Pages/REHS.aspx, https://www.soils.org/certifications
	Some informal drafts have proposed using USDA soils maps in lieu of site investigation, e.g., with trench logging, percolation testing, and topographic analysis.	Based on State Board's Substitute Environmental Document (CEQA document for the OWTS Policy), Section 4.4, Table 4-4, pages 64 and 65, about 6.8% of soils in California are suitable for septic tank absorption fields. Overall, most soils are poorly suited and warrant a site specific evaluation.
9.1.2	Some interested parties have questioned the reasoning behind Tables 1, 3, and 4 in OWTS Policy Sections 7 and 8.	Local Agencies can propose Tier 2 alternative OWTS densities to Table 1 - with appropriate technical justification (see Section 9.5). Table 1 gives conservative acreages based on average rainfall, and related nitrate dilution in shallow groundwater generally after Hantzsche and Finnemore (1992). While we can consider alternative justifications, we suggest this paper as a default. For jurisdictions with large climate variation (e.g., east and west of the Sierra crest), use appropriate average rainfalls for specific areas, not county-wide averages. Also, base averages on a statistically representative sample over time. Tables 3 and 4 give conservative correlations of percolation rates, soils, and application rates, generally after EPA/625/R-00/008, Table 4-3, assuming a BOD of 150 mg/L. These rates are consistent with several similar federal guidance manuals and texts, and consider post-construction soil pore-throat clogging in dispersion trenches, primarily due to accumulating bio-mats (e.g., after Canter and Knox, 1985). If a LAMP proposes substantially faster application rates, especially in areas with identified high nitrate, we will expect technical justification in detail for Section 9.5. For further guidance on the technical basis for Tier 1, we suggest contacting the peer reviewers of the draft OWTS Policy; Ronald W. Crites, P.E., Brown and Caldwell, Davis (530-747-0650) rcrites@brwncald.com, Jörg E. Drewes, Ph.D., National Science Foundation Engineering Research Center, Colorado School of Mines, Golden, CO (303-273-3401) jdrewes@mines.edu, and Charles P. Gerba, University of Arizona, Tuscon, (520-621-6906) gerba@ag.arizona.edu.

9.1.3	Some interested parties have taken issue with our description of intermittently saturated and perched zones as shallowest groundwater. See also Table 2, OWTS Policy Section 8.1.5.	In principal, we must ensure that sufficient unsaturated soils underlie dispersion fields to allow biodegradation of pathogens. Our description does not cover every setting. For example, it does not consider areas with high irrigation rates and saturated near-grade soils (e.g., near rice farms). Nonetheless, a sufficient thickness of unsaturated soil with beneficial bacteria should exist under the dispersion fields.
9.1.4	Some informal drafts have proposed Regional Board approvals of projects within OWTS Prohibition Areas. Some interested parties have requested our consideration of rescinding Prohibition Orders. Some interested parties have proposed using gross acreages of individual parcels to estimate maximum allowable OWTS densities, a misapplication of Hantzsche and Finnemore (1992). For example, some have proposed extending acreage beyond parcel boundaries, under pavement, to adjoining street centerlines, and including building footprints. On Sacramento County's LAMP, Central Valley Water Board staff has indicated potential long term need for further requirements in high domestic well usage areas based on Water Quality Assessment Reports.	See Basin Plans, Chapter IV, *Implementation*; while historical Prohibitions allow exemptions, as a general rule Local Agencies should assume that these and local moratoria preclude coverage under the OWTS Policy. Further assume that rescission of a Prohibition Order is practically infeasible short term. In general, equations in Hantzsche and Finnemore (1992) apply to study area averages, not specific parcels. Use net acreages in estimates of nitrate loading; within a study area, only consider net acreage that allows rainfall recharge to shallowest groundwater (Norman Hantzsche, Questa Engineering, Richmond, pers. comm. 2016). Sacramento County EMD concurs; long term guidelines should consider nitrate loading and groundwater flow directions – both ambient and pumping induced.
9.1.5		
9.1.6		
9.1.7		
9.1.8	Some interested parties in counties with Clean Water Act 303(d) listed impaired water bodies for pathogens have questioned data quality from volunteer groups, e.g., coliform results.	Listing of Wolf and Woods Creeks is not a subject of current debate; proceed with Advanced Protection Management Programs. Staff has reviewed several analogous streams statewide with TMDLs for pathogens; assume that the load allocation for pathogens from OWTS is zero. Staff can consider proposals for further sampling in Water Quality Assessment Reports.
9.1.9		
9.1.10		
9.1.11		
9.1.12		
9.2	Sacramento County's LAMP refers proposed new and replacement OWTS with projected flows 5,000 to 10,000 gallons per day projected flow to the Regional Board for Waste Discharge Requirements.	The Central Valley Water Board prefers that Local Agencies proposing Tier 2 LAMPs agree to cover OWTS <10,000 gpd. While a Local Agency's prerogative to refer smaller OWTS to us, lacking an alternative we would likely direct applicants to State Board General Order 2014-0153, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems*. The applicant would submit a Report of Waste Discharge for processing and approval. Due to relatively low discharge volume and strength, Central Valley Water Board staff estimates processing times typically greater than 6 months, and possibly greater than one year. Dependent on threat and complexity ratings, permit and annual fees would likely range about $1,000 to $5,000. Referrals should be based on a Local Agency's preliminary assessment of threats to water quality, e.g., proximity of supply wells. Both during and after referrals, Local Agencies should work closely with Central Valley Water Board staff.
9.2.1		
9.2.2		
9.2.3		
9.2.4		
9.2.5	Some interested parties have argued that our requirement for providing homeowners with	Procedures are for critical items. We suggest posting a list of qualified service providers on your website.

	procedures to address OWTS failures within 48 hours is unreasonable.	
9.2.6	Some informal drafts have not described the adequacy of disposal locations.	Ensure that local agency-approved disposal facilities have sufficient capacity.
9.2.7		
9.2.8	Some interested parties have argued that local nitrate is primarily agricultural. Others have argued that community wastewater treatment systems affect groundwater relatively more than individual OWTS.	The OWTS Policy generally considers the net effect of individual OWTS as non-point source pollution. In areas with nitrate issues, e.g., in the San Joaquin Watershed, LAMPs should assess impacts from high-density OWTS areas relative to other sources of TDS, EC, and nitrate. LAMPs should also consider relevant historical OWTS Prohibitions in Basin Plans and local moratoria.
9.2.9		
9.2.10		
9.2.11		
9.2.12		
9.2.13		
9.3		
9.3.1		
9.3.2	In previous CCDEH meetings and office visits at County Health Departments, several interested parties have expressed concern about staffing, IT resources, and minimum requirements for Annual and Water Quality Assessment Reports. Some Local Agencies have proposed a phase implementation schedule.	See previous comment on Section 9.1. In general, we plan to use the "straw man" spreadsheet to focus data compilation and upload requirements. For Annual Reports, we will generally expect key focus on indicators of water quality impacts, e.g., OWTS failures due to shallow water table and application rate issues. For Water Quality Assessment Reports, at minimum we will generally expect nitrate data from; small community water systems, Geotracker GAMA Secure, monitoring well results from permitted facilities, and, water quality results from new and proposed supply wells (where already locally required). Central Valley Water Board staff has concerns about meeting equivalent Tier 1 standards during an interim period before full implementation, and does not support this proposal.
9.3.2.1	For some informal drafts, Central Valley Water Board staff has expressed a potential long term need for domestic well sampling.	Where appropriate, i.e., as evidenced in Water Quality Assessment Reports, we may request appropriate domestic well sampling. See also previous response, OWTS Policy Section 9.1.4.
9.3.2.2		
9.3.2.3	Some interested parties have objected to compiling data from other public agency sources (e.g., State Board DDW).	See previous response, OWTS Policy Section 9.1. Our overall intent is to make public data accessible for Water Quality Assessment Reports, for example via Geotracker.
9.3.2.4		
9.3.2.5		
9.3.2.6		
9.3.2.7		
9.3.2.8		
9.3.2.9		
9.4		
9.4.1		
9.4.2		
9.4.3		
9.4.4		
9.4.5	Some informal drafts have proposed leaching areas <70% of conventional systems.	Local Agencies cannot authorize decreased leaching areas for IAPMO Certified dispersal systems with multipliers <0.70 in a LAMP. These would likely require WDRs.
9.4.6		
9.4.7		
9.4.8	Some informal drafts have proposed that Central Valley Water Board staff might approve encroachments of dispersal system bottoms <2 feet above shallowest groundwater.	Local Agencies cannot authorize encroachment <2 feet above shallowest groundwater in a LAMP, for any OWTS, regardless of supplemental treatment. Due to low potential for sufficient treatment for pathogens, staff will not likely further consider such proposals without substantial supplemental treatments.
9.4.9		

9.4.10		
9.4.10.1		
9.4.10.2		
9.4.10.3		
9.4.10.4		
9.4.10.5		
9.4.11	Some interested parties have described areas of extreme financial hardship, in which replacement OWTS do not meet horizontal setbacks, and supplemental treatments are practically infeasible. In such areas, interested parties have informally proposed deed notifications as mitigation measures.	While a deed notification is a possible option, Central Valley Water Board staff has concerns about an indefinite compliance period, for example if a property were bound to a trust. Section 9.4.11 gives Local Agencies the discretion to evaluate the need for supplemental treatments and other mitigation measures based on evidence of limited potential for adverse impact to a public water source, considering topography, soil depth, soil texture, and groundwater separation. Such evaluations might include, but are not limited to, reviews of historical site investigations and water quality samples from relevant supply wells. Local Agencies should maintain such evaluations on file for Central Valley Water Board staff's potential review, and report laboratory results to Geotracker.
9.4.12		
9.5	Some interested parties have objected to our perceived request for point-by-point justification of a LAMP's variation from Tier 1.	Regardless of format, we require adequate technical justification to support LAMP sections that are less stringent than Tier 1. The LAMP as a whole must be at least equally protective of human health and the environment as Tier 1. For example, if Local Agencies propose mitigation measures in lieu of supplemental treatments for OWTS within setbacks in OWTS Policy Section 9.4.10, we would need appropriate justification in detail.
9.6		

References:

Hantzsche, N.N. and E.J. Finnemore (1992). *Predicting groundwater nitrate-nitrogen impacts*. "Groundwater," 30, No. 4, pages 490-499.

Canter, L.W. and R.C. Knox (1985). *Septic Tank System Effects on Groundwater Quality*, Lewis Publishers, Inc. ISBN 0-87371-012-6, 336 pages.